

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. to 70. (Cancelled)
71. (Currently amended) A device for supporting applying force to an anatomical structure, the device comprising:
  - a first body-encircling member configured to wrap around and grip the anatomical structure at a first location;
  - a second body-encircling member configured to wrap around and grip the anatomical structure at a second location that is spaced apart from the first location in a first direction along the anatomical structure;
  - and
  - at least one actuator connected between the first and second body-encircling members, the actuator comprising an inflatable bladder having an asymmetrically elastic wall wherein, upon inflation, the wall constrains the bladder to expand preferentially along an axis extending between the first and second body-encircling members upon inflation such that when the first and second body-encircling members are wrapped around the anatomical structure, inflation of the bladder applies force to force forces the first and second body-encircling members apart, thereby applying traction to the anatomical structure.
72. (Currently amended) A device according to claim [[1]] 71 wherein the bladder comprises a plurality of transversely-spaced generally-parallel tubular portions in fluid

communication through at least one manifold, the tubular portions each expandible lengthwise upon inflation of the bladder and extending between the first and second body-encircling members.

73. (Currently amended) A device according to claim [[2]] 72 wherein the tubular portions extend parallel to the first direction and are closely-spaced to provide a palisade-like arrangement when the bladder is inflated.
74. (Currently amended) A device according to claim [[2]] 72 wherein the tubular portions press against one another and support one another against deflection in a transverse direction when the bladder is inflated.
75. (Currently amended) A device according to claim [[4]] 74 wherein the first and second body encircling members are dimensioned to extend around a waist torso of a person, and wherein the actuator extends through an angle which is less than 270 degrees as measured relative to a central point on a coronal midline of a person wearing the device.
76. (Currently amended) A device according to claim [[5]] 71 wherein the first and second body encircling members are dimensioned to extend around a torso of a person, and wherein the actuator extends through an angle which is at least 180 degrees as measured relative to [[the]] a central point on [[the]] a coronal midline of the person wearing the device.
77. (Currently amended) A device according to claim [[6]] 76 wherein the bladder expands preferentially in a direction

lying substantially in a surface defined between the first and second body-encircling members.

78. (Currently amended) A device according to claim [[3]] 73 wherein the wall of the bladder has a higher modulus of elasticity on inward-facing outward-facing sides of the tubular portions of the actuator than on outward-facing inward-facing sides of the tubular portions of the actuator.
79. (Currently amended) A device according to claim [[2]] 72 wherein the wall comprises an air-impermeable layer and a guide.
80. (Currently amended) A device according to claim [[9]] 79 wherein the guide comprises two layers of asymmetrically-elastic material joined at longitudinally-extending seams wherein a high-stretch direction of the material is oriented lengthwise relative to the tubular portions.
81. (Currently amended) A device according to claim [[10]] 80 wherein a low-stretch direction of the material is oriented circumferentially around the tubular portions.
82. (Currently amended) A device according to claim [[11]] 81 wherein the tubular portions are generally cylindrical when the bladder is inflated and wherein portions of the guide that contact the tubular portions are generally cylindrical when the bladder is inflated.
83. (Currently amended) A device according to claim [[2]] 72 wherein, when laid flat, the actuator is generally rectangular and has a width in a direction along the body-

encircling members that is greater than a height extending between the body-encircling members.

84. (Currently amended) A device according to claim [[13]] 83 wherein the tubular portions extend substantially at right angles to the body-encircling members.
85. (Currently amended) A device according to claim [[14]] 84 wherein the wall of the actuator in an area on an inner surface of the actuator has a higher lower modulus of elasticity than that of the wall of the actuator on an area on an outer surface of the actuator.
86. (Currently amended) A device according to claim [[2]] 72 wherein the guide constrains the expansion of the tubular portions asymmetrically, thereby causing the actuator to bend when the bladder is inflated.
87. (Currently amended) A device according to claim [[1]] 71 wherein the first and second body encircling members are dimensioned to extend around a waist- torso of a person, and wherein the actuator extends through an angle which is less than 270 degrees as measured relative to a central point on a coronal midline of a person wearing the device.
88. (Currently amended) A device according to claim [[17]] 87 wherein the device is dimensioned to apply unloading force to a lumbar spine of a person, and wherein the actuator does not extend across a front of the person.
89. (Currently amended) A device according to claim [[1]] 71 wherein the first and second body encircling members are dimensioned to extend around a waist torso of a person, the

device comprising a first actuator located to be adjacent a first hip of a person wearing the device and a second actuator located to be adjacent a second hip of the person wearing the device.

90. (Currently amended) A device according to claim [[19]] 89 wherein the first and second actuators are individually adjustable.

91. (Currently amended) A method for supporting applying force to a body part comprising:

providing a device comprising first and second body-encircling members, an inflatable bladder having an asymmetrically-elastic wall connected between the first and second body-encircling members;

securing the first body-encircling member around the body part at a first location;

securing the first and second body-encircling members one on either side of member around the body part at a second location spaced apart from the first location in a direction along the body part to be supported; and

inflating the bladder;

whereby, upon inflation, the asymmetrically-expandable wall causes the bladder to expand preferentially in a direction that forces the first and second body-encircling members apart thereby applying traction to the body part.

92. (Currently amended) A method according to claim [[21]] 91 wherein the bladder comprises a plurality of transversely spaced generally parallel tubular portions and inflating the

bladder comprises allowing the tubular portions to support one another in a closely-spaced palisade-like arrangement.

93. (Currently amended) A method according to claim [[22]] 92 wherein the wall of the bladder has a higher lower modulus of elasticity on [[an]] inward-facing sides of the tubular portions of the actuator than on outward-facing sides of the tubular portions of the actuator and the method comprises, ~~allowing central parts of~~ the tubular portions to bow inwardly during inflation of the bladder.

94. (Currently amended) A method according to claim [[21]] 91 wherein the body part ~~to be supported~~ is a lumbar spine of a person and securing the first and second body-encircling members ~~one on either side of the body part to be supported~~ comprises:

securing the first body-encircling member around the person's torso below the lumbar spine such that the portion of the first and second body-encircling members that is connected to the bladder extends across a back of the person; and,

securing the second body-encircling member around the person's torso above the lumbar spine.

95. (New) A device according to claim 71 wherein the asymmetrically elastic wall comprises a woven asymmetrically-elastic material having a high-stretch direction oriented parallel to the first direction.

96. (New) A device according to claim 76 wherein the actuator does not extend across a front of the person.

97. (New) A device according to claim 71 wherein:

the first and second body encircling members are dimensioned to extend around a torso of a person;

the at least one actuator comprises one or more actuators arranged along the first and second body encircling members so as to extend through an angle which is more than 180 degrees as measured relative to a central point on a coronal midline of a person wearing the device; and,

the at least one actuator does not extend across a front of the person wearing the device.

98. (New) A device according to claim 71 wherein the first and second body encircling members are dimensioned to extend around a torso of a wearer and the at least one actuator is dimensioned to extend substantially continuously around sides and back of the wearer's torso while leaving a front of the wearer's torso unobstructed by the at least one actuator.